



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,878	10/21/2003	Osamu Murakami	2003_1276A	2776

513 7590 08/25/2005

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

BELLAMY, TAMIKO D

ART UNIT PAPER NUMBER

2856

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,878

Applicant(s)

MURAKAMI ET AL.

Examiner

Tamiko D. Bellamy

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/15/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 11, 14-16, 18, 20-22, 25-27, 29, and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 11, 14-16, 18, 20-22, 25-27, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 15 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 6/15/05. These drawings are accepted.

Claim Objections

2. Claim 25 is objected to because of the following informalities:
 - a. Claim 25, line 2, change "24" to -22--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10, 14, 26, 27, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Collins et al. (6,227,041).

Re claim 10, as depicted in fig. 2, Collins et al. discloses a radiation thermometer (e.g., infrared photosensor 13) above the sample plate (e.g., sample holder 15), such that when the sample (12) is on the sample plate (e.g., sample holder 15) the radiation thermometer (e.g., infrared photosensor 13) is spaced from the sample (12) by a distance that allows the infrared radiation emitted from the sample (12) to be received by the radiation thermometer (e.g., infrared photosensor 13) (Col. 3, lines 29-40).

Re claim 14, Collins et al. discloses that the infrared detector (13), which inherently includes an opening through which the infrared radiation is to be received, could be placed behind an infrared transparent material (Col. 3, lines 37-40). The infrared transparent material is equivalent to a clear protective cover for covering the opening.

Re claim 26, as depicted in fig. 2, Collins et al. discloses a device for determining the moisture content of a sample (12) (Col. 3, lines 10-14). Collins et al. discloses a radiation thermometer (e.g., infrared photosensor 13) for determining a surface temperature of the sample (12) by detecting infrared radiation emitted from the sample (12) (Col. 3, lines 29-40). Collins et al. discloses that the infrared detector (13) could be placed behind an infrared transparent material (Col. 3, lines 37-40). The infrared transparent material is equivalent to a heat insulating cover.

Re claim 27, Collins et al. discloses a device for determining moisture content of a sample (12)(Col. 3, lines 10-14). Collins et al. discloses a radiation thermometer (e.g., infrared photosensor 13) for determining a surface temperature of the sample (12) by detecting infrared radiation emitted from the sample (Col. 3, lines 40-45). Collins et al. discloses that the infrared detector (13), which inherently includes an opening through which the infrared radiation is to be received, could be placed behind an infrared transparent material (Col. 3, lines 37-40). The infrared transparent material is equivalent to a clear protective cover for covering the opening.

Re claim 29, as depicted in fig. 2, Collins et al. discloses a radiation thermometer (e.g., infrared photosensor 13) above the sample plate (e.g., sample holder 15), such that

when the sample (12) is on the sample plate (e.g., sample holder 15) the radiation thermometer (e.g., infrared photosensor 13) is spaced from the sample (12) by a distance that allows the infrared radiation emitted from the sample (12) to be received by the radiation thermometer (e.g., infrared photosensor 13) (Col. 3, lines 29-40).

5. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Pappas et al. (5,983,711).

Re claim 10, as depicted in fig. 1, Pappas et al. discloses a radiation thermometer (e.g., infrared sensor array 36) under the sample plate (e.g., thermally conductive core 46), such that when the sample (24) is on the sample plate (e.g., thermally conductive core 46) the radiation thermometer (e.g., infrared sensor array 36) is spaced from the sample (24) by a distance that allows the infrared radiation emitted from the sample (24) to be received by the radiation thermometer (e.g., infrared sensor array 36) (Col. 5, lines 1-18).

6. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Tono et al. (JP58165038A).

Re to claim 10, as depicted in fig. 1, Tono et al. discloses the radiation thermometer (4) above the sample (e.g., sand 6), such that when the sample (e.g., sand 6) is on the sample plate (e.g., tray 13a), the radiation thermometer (4) is spaced from the

Art Unit: 2856

sample (e.g., sand 6) by a distance that allows the infrared emitted from the sample (e.g., sand 6) to be received by the radiation thermometer (4).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (4,798,252) in view of Graalman et al. (4,434,563) as applied to claim 21, and further in view of Knothe et al. (4,798,252).

Re claim 11, the combination of Collins et al. and Graalman et al. discloses a radiation thermometer (e.g., infrared photosensor 13) above a sample (12) on a sample plate (e.g., sample holder 15) (See Collins et al. fig. 2). The combination of Collins et al. and Graalman et al. lacks the detail of a heating reference element, for performing calibration of the radiation thermometer, removably disposed within the sample plate. As depicted in figs. 1 and 2, Knothe et al. discloses a heating reference element (e.g., combination of temperature gauging disc 14 with temperature sensor 19), for performing temperature calibration of a sensor (8), removably disposed within the sample plate (e.g., sheet 23) (Col. 3, lines 53-68). The temperature sensor (8) that Knothe et al. discloses inherently detects the temperature of the sample as well. To replace the type of temperature sensor radiation thermometer is a design consideration clearly in the preview of one having ordinary skill in the art. Therefore, to modify the combination of Collins et

Art Unit: 2856

al. and Graalman et al. by employing a heating reference element would have been obvious to one of ordinary skill in the art at the time of the invention since Knothe et al. teaches a drying balance device having these design characteristics. The skilled artisan would be motivated to combine the teachings of the combination of Collins et al. and Graalman et al. and Knothe et al. since the combination of Collins et al. and Graalman et al. states that the invention is applicable to measuring the moisture/volatile contents of a sample and Knothe et al. is directed to detecting the drying temperature of a sample.

9. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (4,798,252) and Graalman et al. (4,434,563), and further in view of Knothe et al. (4,798,252).

Re claim 22, Collins et al. discloses a radiation thermometer (e.g., infrared photosensor 13) positioned to receive infrared radiation emitted from the sample (12).

Collins et al. lacks the detail of a radiation guided by a light conducting material, and a heating reference element. Graalman et al. discloses in fig. 3, radiation guided by the light conducting member (e.g., condenser lens 46). Therefore, to modify Collins et al. by employing guiding radiation by a light conducting member would have been obvious to one of ordinary skill in the art at the time of the invention since Graalman et al. teaches a drying device having these design characteristics. The skilled artisan would be motivated to combine the teachings of Collins et al. and Graalman et al. since Collins et al. states that his invention is applicable to measuring the moisture/volatile contents of a sample and Graalman et al. is directed to a device measuring moisture content of a sample/tobacco. The combination of Collins et al. Graalman et al. discloses a radiation

thermometer (e.g., infrared photosensor 13) positioned to receive infrared radiation emitted from the sample (12) after the radiation has been guided by the light conducting member (See Collins et al. fig. 2; Graalman et al fig. 3). **The combination of Collins et al. and Graalman et al. lacks the detail of a heating reference element, for performing calibration of the radiation thermometer.** As depicted in figs. 1 and 2, Knothe et al. discloses a heating reference element (e.g., combination of temperature gauging disc 14 with temperature sensor 19), for performing temperature calibration of a sensor (8), removably disposed within the sample plate (e.g., sheet 23) (Col. 3, lines 53-68). The temperature sensor (8) that Knothe et al. discloses inherently detects the temperature of the sample as well. To replace the type of temperature sensor with a radiation thermometer is a design consideration clearly within the preview of one having ordinary skill in the art. Therefore, to modify the combination of Collins et al. and Graalman et al. by employing a heating reference element would have been obvious to one of ordinary skill in the art at the time of the invention since Knothe et al. teaches a drying balance device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of the combination of Collins et al. and Graalman et al. and Knothe et al. since the combination of Collins et al. and Graalman et al. states that the invention is applicable to measuring the moisture/volatile contents of a sample and Knothe et al. is directed to detecting the drying temperature of a sample.

Re claim 25, Collins et al. discloses that the infrared detector (13), which inherently includes an opening through which the infrared radiation is to be received, could be placed behind an infrared transparent material (Col. 3, lines 37-40). The

Art Unit: 2856

infrared transparent material is equivalent to a clear protective cover for covering the opening.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (6,227,041) in view of Knothe et al. (4,798,252).

Re claim 15, Collins et al. discloses a heating drying type infrared radiation moisture meter. Collins et al. lacks the detail of a heating reference element, for performing calibration of the radiation thermometer, removably disposed within the sample plate. As depicted in figs. 1 and 2, Knothe et al. discloses a heating reference element (e.g., combination of temperature gauging disc 14 with temperature sensor 19), for performing temperature calibration of a sensor (8), removably disposed within the sample plate (e.g., sheet 23) (Col. 3, lines 53-68). The temperature sensor (8) that Knothe et al. discloses inherently detects the temperature of the sample as well. To replace the type of temperature sensor with a radiation thermometer is a design consideration clearly within the preview of one having ordinary skill in the art. Therefore, to modify Collins et al. by employing a heating reference element would have been obvious to one of ordinary skill in the art at the time of the invention since Knothe et al. teaches a drying balance device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Collins et al. and Knothe et al. since the Collins et al. states that his invention is applicable to measuring the moisture/volatile contents of a sample and Knothe et al. is directed to detecting the drying temperature of a sample.

11. Claims 16, 18, 20, 21, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (6,227,041) in view of Graalman et al. (4,434,563).

Re claims 16, 18, and 21, Collins et al. discloses in fig. 2, a radiation thermometer (e.g., infrared photosensor 13) above a sample (12) on a sample plate (e.g., sample holder 15). Collins et al. lacks the detail of a light conducting member above the sample plate, and the light conducting member comprising one of a mirror or an optical fiber.

Graalman et al. discloses in fig. 3, an infrared radiation thermometer (42) including a light conducting member (e.g., condenser lens 46), which is equivalent to a mirror.

Therefore, to modify Collins et al. by employing a light conducting member comprising one of a mirror and optical fiber would have been obvious to one of ordinary skill in the art at the time of the invention since Graalman et al. teaches a drying device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Collins et al. and Graalman et al. since Collins et al. states that his invention is applicable to measuring moisture content of a sample and Graalman et al. is directed to monitoring the moisture content of a sample/tobacco.

Re claim 20, Collins et al. discloses in fig. 2, discloses a radiation thermometer (e.g., infrared photosensor 13) positioned to receive infrared radiation emitted from the sample (12). Collins et al. lacks the detail of a light conducting member comprising one of a mirror or an optical fiber. Graalman et al. discloses in fig. 3, an infrared radiation thermometer (42) including a light conducting member (e.g., condenser lens 46), which is equivalent to a mirror. Therefore, to modify Collins et al. by employing a light conducting member comprising one of a mirror and an optical fiber would have been

obvious to one of ordinary skill in the art at the time of the invention since Graalman et al. teaches a drying device having these design characteristics. The skilled artisan would be motivated to combine the teachings of Collins et al. and Graalman et al. since Collins et al. states that his invention is applicable to measuring moisture content of a sample and Graalman et al. is directed to monitoring the moisture content of a sample/tobacco.

Re claim 30, Collins et al. discloses in fig. 2, discloses a radiation thermometer (e.g., infrared photosensor 13) positioned to receive infrared radiation emitted from the sample (12). Collins et al. lacks the detail of a light conducting member above the sample plate. Graalman et al. discloses in fig. 3, an infrared radiation thermometer (42) including a light conducting member (e.g., condenser lens 46) above the sample plate. Therefore, to modify Collins et al. by employing a light conducting member would have been obvious to one of ordinary skill in the art at the time of the invention since Graalman et al. teaches a drying device having these design characteristics. The skilled artisan would be motivated to combine the teachings of Collins et al. and Graalman et al. since Collins et al. states that his invention is applicable to measuring moisture content of a sample and Graalman et al. is directed to monitoring the moisture content of a sample/tobacco.

Response to Arguments

12. Applicant's arguments with respect to claims 10, 14-16, 21, 22, 27, and 28 have been considered but are moot in view of the new ground(s) of rejection. It is the examiner's position that claims 10, 11, 14-16, 18, 20-22, 25-27, 29, and 30 are not patentable in view of the newly applied art of Collins et al. (6,227,041), Collins et al. (4,798,252) in view of Graalman et al. (4,434,563), and further in view of Knothe et al. (4,798,252).

Art Unit: 2856

Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy

T.B.
August 10, 2005


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800